Cementing Related Standards
API RP 10B-3, API RP 10B-4 & API RP 10F

BSEE Standards Workshop
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Presented by:
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RP 10B-3: *Testing of Deepwater Well Cement Formulations*

- WG formed to revise RP 10B-3 to enhance testing methods for cementing in deepwater environments at any depth below mudline
- Substantial modifications include:
  - Recommendations on mathematical temperature modeling and methods for determining well simulation thickening time and compressive strength test temperature and pressure ramps based on specific well conditions
  - Considerations for heat-of-hydration & thermal mass effects in large annuli
  - Provisions for simulating rig surface mixing conditions in laboratory testing
  - Improved compressive strength and static gel strength test methods
- Second draft ready for user review in January 2013

RP 10B-4: *Preparation and Testing of Foamed Cement Slurries at Atmospheric Pressure*

- WG formed to revise API RP 10B-4 to improve procedures for testing foamed cement under atmospheric pressure and develop new procedures for testing under elevated pressure and temperature conditions
- Phase 1: Short term atmospheric work to be published as 2nd Edition
  - Improve procedures for testing stability of atmospherically generated foamed cement
  - Test at minimum and maximum in-situ foam quality expected in the well
  - First working draft completed and awaiting user review & feedback by YE
- Phase 2: Long term pressurized work to be published as 3rd Edition
  - Develop procedures and equipment for lab preparation of foamed cement slurries under elevated pressures (≥1000 psi) and temperatures
  - Explore methods to evaluate impact of pressure, temperature and shear rate on foamed cement properties such as, bubble size distribution, foam stability, and mechanical properties of set cement
  - Investigate methods to simulate field foam generation in the lab

RP 10F: *Performance Testing of Cementing Float Equipment*

- WG formed to develop RP 10F into a Spec with an API Monogram
  - Include acceptance criteria and checkpoints
  - Include requirements for test frequency
  - May include requirements for system tests versus component tests
  - Evaluate test conditions for well conditions not currently considered
    - Non-aqueous fluids exposure
    - Differential pressure ratings higher than the current 5000 psi
    - Gas sealing float equipment
    - High angle/horizontal applications
    - High flow rates with high solids fluids
- First draft in progress with expected release for comments by YE

Thank You
Questions?